

0:00:05.870,0:00:06.870
Please stand by for real time captions.

0:00:06.870,0:00:13.769
>> Hello and welcome to the State of 911 webinar series hosted by that National 911 Program.

0:00:13.769,0:00:18.670
My name is Sherri and I will be the moderator for today's session.

0:00:18.670,0:00:28.790
This webinar series is designed to provide useful information for the 911 stakeholder

0:00:28.790,0:00:35.230
community about federal and state participation in the planning, design and implementation

0:00:35.230,0:00:39.960
of Next Generation 911 or NG911 systems.

0:00:39.960,0:00:47.960
It includes real experiences from leaders utilizing these processes throughout the country.

0:00:47.960,0:00:57.370
Today's session will feature information on NG911 in Canada as well as the Kentucky PSAP

0:00:57.370,0:00:58.370
certification process.

0:00:58.370,0:01:06.040
For closed captioning, please copy and paste the URL link in the chat window to an additional

0:01:06.040,0:01:07.490
web browser.

0:01:07.490,0:01:15.080
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0:01:34.110,0:01:39.750
Please note that all participants' phone lines have been put in a listen-only mode

0:01:39.750,0:01:42.750
and this webinar is being recorded.

0:01:42.750,0:01:48.390

To ask questions of our presenters feel free to take one of two actions.

0:01:48.390,0:01:53.721

Using GoToWebinar's question feature located on the right-hand side of your screen, enter

0:01:53.721,0:01:59.690

your question at any time during the presentation and it will be entered into a queue.

0:01:59.690,0:02:04.910

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0:02:04.910,0:02:10.849

Or, if you'd like to ask your question live, use the raised hand feature to request your

0:02:10.849,0:02:16.519

phone line be unmuted and you will be called upon to ask your question.

0:02:16.519,0:02:22.450

Individuals registered for this webinar will receive access to today's PowerPoint and the

0:02:22.450,0:02:23.689

webinar recording.

0:02:23.689,0:02:29.590

With that, I would like to turn it over to Laurie to introduce our first speaker, Mr.

0:02:29.590,0:02:31.849

Etienne Robelin.

0:02:31.849,0:02:33.569

Laurie?

0:02:33.569,0:02:42.799

Thanks Sherri, and welcome everyone to today's webinar with special thanks to our first speakers

0:02:42.799,0:02:48.540

from our neighbors to the North who are all with the emergency services policy and the

0:02:48.540,0:02:53.849

Canadian Radio-television and Telecommunications Commission, or CRTC.

0:02:53.849,0:02:56.230

With us today are three speakers.

0:02:56.230,0:03:00.459

Etienne Robelin, Mylene Germain and Joel McGrath.

0:03:00.459,0:03:04.120
So again, with my thanks, the floor is yours.

0:03:04.120,0:03:08.780
Thank you very much Sherri.

0:03:08.780,0:03:13.120
So once again, my name is Etienne Robelin,
I am the Manager of the emergency services

0:03:13.120,0:03:18.939
policy team at Canadian Radio-television and
Telecommunications Commission, CRTC for short,

0:03:18.939,0:03:22.010
or sometimes referred to as Commission.

0:03:22.010,0:03:25.450
Not to be mistaken obviously with the Federal
Communications Commission, which is on your

0:03:25.450,0:03:27.989
side of the border.

0:03:27.989,0:03:33.159
So we also have Mylene Germain and Joel McGrath,
two of my senior analysts on the call as well.

0:03:33.159,0:03:38.709
And in participation mode, listening mode,
we have our two junior engineers, Alex Pittman

0:03:38.709,0:03:40.719
and Landen Entwistle.

0:03:40.719,0:03:46.029
So, over the next 20 minutes or so I will
be providing an update on Canada's efforts

0:03:46.029,0:03:48.389
to implement NG911.

0:03:48.389,0:03:52.150
So I'm not going to take for granted that
everyone knows what the CRTC does, so I will

0:03:52.150,0:03:57.220
provide a brief introduction on who the Commission
is and the role that we play in 911 governance.

0:03:57.220,0:04:01.330
Then we'll discuss our approach to NG911
and some of their related initiatives.

0:04:01.330,0:04:06.590
And, then conclude with our current status
and some lessons learned.

0:04:06.590,0:04:10.049

So, first slide here.

0:04:10.049,0:04:12.040
So, who is the CRTC then?

0:04:12.040,0:04:17.620
So, first of all, we are an administrative tribunal that regulates and supervises broadcasting

0:04:17.620,0:04:19.930
and telecommunications services in the public interest.

0:04:19.930,0:04:25.590
And this means that we are dedicated to ensuring that Canadians have access to a world-class

0:04:25.590,0:04:28.740
communications system and that their needs and interests are at the center of the system

0:04:28.740,0:04:30.240
that provides those services.

0:04:30.240,0:04:35.740
So our mandate is entrusted to us by the Parliament of Canada and focuses on achieving all the

0:04:35.740,0:04:41.699
objectives established in the Broadcasting Act, the Telecommunications Act and Canada's

0:04:41.699,0:04:43.639
anti-spam legislation.

0:04:43.639,0:04:47.490
So in terms of actual regulatory activities, here are a few things as you can see on the

0:04:47.490,0:04:51.169
screen that CRTC as an independent regulator is involved in.

0:04:51.169,0:04:55.680
So first, we promote compliance with regulations such as the unsolicited telecommunications

0:04:55.680,0:05:01.280
rules including the "do not call list" and Canada's anti-spam legislation.

0:05:01.280,0:05:05.080
We approve tariffs and certain agreements for the communications sector, telecommunications

0:05:05.080,0:05:06.100
sector rather.

0:05:06.100,0:05:10.270

We encourage competition and telecommunications markets to ensure that Canadians have a choice

0:05:10.270,0:05:12.819
of innovative and affordable services.

0:05:12.819,0:05:16.860
And, we respond to requests for information and concerns about broadcasting and telecommunications

0:05:16.860,0:05:17.860
issues.

0:05:17.860,0:05:21.801
So, to fulfill our mandates we first have to understand the needs and interests of the

0:05:21.801,0:05:25.460
Canadians who make use of broadcasting and telecommunication services.

0:05:25.460,0:05:30.050
As a result of that, we regularly hold public hearings, round table discussions, informal

0:05:30.050,0:05:34.670
forums, and online discussion forums designed to gather and gain views about broadcasting

0:05:34.670,0:05:35.940
and telecommunication services.

0:05:35.940,0:05:40.129
This is information that we can then act on to serve the public's interest.

0:05:40.129,0:05:43.290
Next slide please.

0:05:43.290,0:05:47.199
So what is CRTC's mandate related to 911 in Canada?

0:05:47.199,0:05:49.780
So just an overview a very broad range of things.

0:05:49.780,0:05:52.610
But we're focusing on 911.

0:05:52.610,0:05:57.409
So Canada's - I'm sorry - CRTC's role in the regulation of 911 falls under

0:05:57.409,0:05:59.170
the Telecommunications Act.

0:05:59.170,0:06:03.229
So under the Act, the Commission regulates

the provision of telecommunications services

0:06:03.229,0:06:07.080

by telecommunication service providers, TSPs.

0:06:07.080,0:06:11.750

In the 911 context, the Commission's role is to exercise regulatory oversight over

0:06:11.750,0:06:18.199

the telecommunications access provided by TSPs to enable Canadians to contact PSAPs.

0:06:18.199,0:06:21.699

And this oversight includes determining local and national policies, standards, conditions

0:06:21.699,0:06:27.729

of services, agreements, eligibility to operate and the approval of tariffs for telecommunications

0:06:27.729,0:06:29.129

services.

0:06:29.129,0:06:33.110

The Commission also determines the use of three digit numbers, such as 911, ensuring

0:06:33.110,0:06:36.039

they are used appropriately and in order to maintain public confidence.

0:06:36.039,0:06:41.780

And last but not least, we provide information on 911 services to the public and its industry.

0:06:41.780,0:06:45.919

So we often field requests for information on how 911 works in Canada, especially with

0:06:45.919,0:06:49.900

the upcoming transition from current 911 networks to NG911.

0:06:49.900,0:06:55.610

So, 911, its fairly ambiguous, everyone knows what it does but not everyone knows, obviously,

0:06:55.610,0:06:56.610

how it works in the background.

0:06:56.610,0:07:01.050

So we do field a lot of questions in that particular domain.

0:07:01.050,0:07:02.469

Next slide please.

0:07:02.469,0:07:08.810

So, in terms of Canada's jurisdiction, sorry, CRTC's jurisdiction over 911.

0:07:08.810,0:07:13.750

So here you see a diagram that we usually present internally when introducing 911 concepts

0:07:13.750,0:07:16.719

to new employees at the Commission including new commissioners themselves.

0:07:16.719,0:07:21.530

So we will revisit this again in future slides when we look at the transition from current

0:07:21.530,0:07:23.259

911 to NG911.

0:07:23.259,0:07:27.220

But for now it will serve to illustrate the delineation of the Commission's jurisdiction.

0:07:27.220,0:07:31.030

So, starting with the originating network portion on the left.

0:07:31.030,0:07:36.569

As touched on in the previous slide, the Commission's role is to exercise regulatory oversight of

0:07:36.569,0:07:42.259

the access provided by TSPs to 911 services to enable communication between Canadians

0:07:42.259,0:07:44.490

and PSAPs, wherever a PSAP has been established.

0:07:44.490,0:07:49.120

And this is done by provincial, territorial or municipal governments in our case.

0:07:49.120,0:07:53.889

So, the Commission regulates the 911 access services offered by TSPs and, specifically,

0:07:53.889,0:07:58.939

the Commission establishes regulatory policies, standards and conditions of service and approves

0:07:58.939,0:08:03.689

tariffs and agreements governing access by Canadians to TSPs.

0:08:03.689,0:08:06.289

Looking at the middle portion now for the 911 networks.

0:08:06.289,0:08:10.979

So, the Commission regulates the operation

of related 911 networks by the incumbent local

0:08:10.979,0:08:16.090
exchange carriers, the ILECs, who have been
mandated by the Commission to provide originating

0:08:16.090,0:08:21.360
network providers with wholesale 911 access
service that enables them to route 911 calls

0:08:21.360,0:08:26.479
and ancillary information over 911 networks
to the appropriate PSAP.

0:08:26.479,0:08:31.099
And on the far right here, we have the PSAPs
who answer the 911 calls, determine the nature,

0:08:31.099,0:08:34.289
the location and emergency, and dispatch the
first responders.

0:08:34.289,0:08:38.310
So PSAPs fall under the responsibility of
the 911 Authorities.

0:08:38.310,0:08:42.409
And as I mentioned, for the most part, these
are the provincial or territorial governments,

0:08:42.409,0:08:47.931
but in some cases the responsible for establishing
and managing PSAPs and emergency response

0:08:47.931,0:08:51.130
agencies have been delegated down to municipal
governments.

0:08:51.130,0:08:55.860
So regardless of all that, it's all to say
that PSAPs are outside of CRTC's jurisdiction.

0:08:55.860,0:09:01.649
So we can recommend and encourage PSAPs to
prepare for or do something and the decisions

0:09:01.649,0:09:07.750
and policies related to 911 that we release
have an impact on PSAPs but cannot outright

0:09:07.750,0:09:12.680
mandate them to do anything or direct them
to anything through those policies.

0:09:12.680,0:09:16.090
Next slide please.

0:09:16.090,0:09:21.760
So despite PSAPs being outside of our jurisdiction,

that isn't to say that there's no collaboration

0:09:21.760,0:09:24.350

or relationship between the CRTC and PSAPs.

0:09:24.350,0:09:28.030

So in order for us to fulfill our mandates
we have to understand the needs and interests

0:09:28.030,0:09:32.040

of Canadians to make use of telecommunication
services such as 911.

0:09:32.040,0:09:37.209

And, one of the ways we do that is through
roundtable discussions which is where CISC

0:09:37.209,0:09:38.339

comes in here.

0:09:38.339,0:09:43.660

So, the CRTC Interconnection Steering Committee,
or CISC for short, is a steering committee

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complete with formal guidelines, operating
principles whose mandate is to undertake tasks

0:09:48.690,0:09:54.120

related to the technical, administrative and
operation issues on matters assigned by the

0:09:54.120,0:09:59.310

CRTC or originated by the public that fall
within the CRTC's jurisdiction.

0:09:59.310,0:10:05.960

So, its currently chaired by CRTC staff, so
that's my director Michel Murray.

0:10:05.960,0:10:09.830

And within CISC, there are a number of working
groups that handle various matters such as

0:10:09.830,0:10:16.389

numbering and business processes, all of which
are public forums shared by non-CRTC volunteers.

0:10:16.389,0:10:20.589

So the working group relevant to this discussion
is the Emergency Services Working Group, which

0:10:20.589,0:10:26.610

we call ESG for short, which is currently
chaired by Mr. Chris Kellett, who is a non-CRTC

0:10:26.610,0:10:28.010

volunteer.

0:10:28.010,0:10:34.060

So the ESWG is composed of TSPs, PSAPs, vendors, 911 industry experts who all work together

0:10:34.060,0:10:38.230

to address issues that relate to the provisioning of 911 services, including the technical,

0:10:38.230,0:10:43.399

operational and implementation of 911 serves as assigned by the CRTC or as requested by

0:10:43.399,0:10:44.720

stakeholders.

0:10:44.720,0:10:50.380

So for example, ESWG addresses issues related to NG911 transition considerations, NG911

0:10:50.380,0:10:55.589

mapping data, NG911 reliability, resiliency and securities, and additional data just to

0:10:55.589,0:10:57.079

name a few.

0:10:57.079,0:11:02.459

So while not directly a part of ESWGs membership, Commission staff, such as myself, Mulan and

0:11:02.459,0:11:06.560

Joel, participate in near daily teleconferences to provide some oversight and to make sure

0:11:06.560,0:11:09.490

discussions remain in line with mission directives.

0:11:09.490,0:11:15.610

So, just to recap and summarize here, so the CRTC establishes policies related to 911 and

0:11:15.610,0:11:19.690

the ESWG addresses technical and operational aspects related to the implementation of those

0:11:19.690,0:11:21.280

policies.

0:11:21.280,0:11:26.360

And aside from ESWG, we also participate somewhat regularly in NENA events as well, such as

0:11:26.360,0:11:27.870

the NENA Conference and Expo.

0:11:27.870,0:11:33.709

And we've got a non-voting seat on NENA's NG911 Interoperability Oversight Commission,

0:11:33.709,0:11:35.430
or NIOC.

0:11:35.430,0:11:36.610
Next slide please.

0:11:36.610,0:11:42.490
So, how do we get to NG911 then?

0:11:42.490,0:11:49.649
So, our road to NG911 began in 2014 when the
Commission recognized in its 911 action plan

0:11:49.649,0:11:54.329
that the transition to Internet Protocol-based
telecommunications was the way of the future

0:11:54.329,0:11:58.589
and that it could be leveraged to overcome
limitations with our current 911 communications

0:11:58.589,0:12:03.110
systems and modernize the way the Canadians
interact with first responders when communicating

0:12:03.110,0:12:04.390
emergencies.

0:12:04.390,0:12:10.060
In the following year, in 2015, based on recommendations
from ESWG, the Commission approved the adoption

0:12:10.060,0:12:14.029
of NENA's i3 standards for NG911.

0:12:14.029,0:12:18.699
Being able to do that, it will facilitate
the transition from legacy 911 networks to

0:12:18.699,0:12:23.779
Internet Protocol-based NG911 systems and
it will provide a clear path forward for all

0:12:23.779,0:12:25.769
911 stakeholders and Canadians.

0:12:25.769,0:12:30.370
And a couple of months after that in 2016,
the Commission lost the preceding to establish

0:12:30.370,0:12:33.029
a regulatory framework for NG911.

0:12:33.029,0:12:36.600
So this was a public hearing, meaning that
any person or organization with an interest

0:12:36.600,0:12:40.840
in the topic could submit written comments

or appear to speak before the Commission in

0:12:40.840,0:12:45.870

person to provide their views on the move to NG911.

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Next slide please.

0:12:49.390,0:12:56.880

So all this led to Telecom Regulatory Policy 2017-182, which has quite a long title here,

0:12:56.880,0:13:02.519

next-generation 9-1-1 – Modernizing 9-1-1 networks to meet the public safety needs of

0:13:02.519,0:13:03.519

Canadians.

0:13:03.519,0:13:07.790

So this was the very first decision to enforce as well as formal obligations on TSPs and

0:13:07.790,0:13:12.800

9-1-1 network providers within the context of implementing NG911 and is often referred

0:13:12.800,0:13:15.450

to the NG911 framework.

0:13:15.450,0:13:20.780

A couple of key highlights from the decision were that the Commission noted that the current

0:13:20.780,0:13:27.810

government framework, which is based on direct Commission oversight over ILECs as the 911

0:13:27.810,0:13:34.089

providers, has resulted in things being provided with 911 service through high-quality, reliable,

0:13:34.089,0:13:35.959

resilient and secure 911 networks.

0:13:35.959,0:13:39.790

So given the importance of 911 services to Canadians, the Commission determined that

0:13:39.790,0:13:44.190

it was in the public interest that the Commission retain direct oversight over these services

0:13:44.190,0:13:49.340

and that the governance and funding model that supports NG911 services would therefore

0:13:49.340,0:13:54.010

include an active supervisory role for the Commission so they can ensure the 911 services

0:13:54.010,0:13:58.990
are reliable, resilient and secure, and that they are available to Canadians at a cost-effective

0:13:58.990,0:13:59.990
rate.

0:13:59.990,0:14:04.580
Further, the Commission found that an approach based on Commission-approved tariffs would

0:14:04.580,0:14:09.589
provide the Commission with the tools necessary to ensure that funding of NG911 is provided

0:14:09.589,0:14:11.769
as cost-effectively as possible.

0:14:11.769,0:14:15.350
So this approach would ensure that funding is based on recovering the actual costs of

0:14:15.350,0:14:20.970
building, operating, and maintaining the NG911 networks and that costs are subject to the

0:14:20.970,0:14:24.389
Commission's disclosure guidelines to ensure that they are as transparent as possible.

0:14:24.389,0:14:30.301
So as such, the Commission determined that an ILEC stewardship model under the Commission

0:14:30.301,0:14:35.070
oversight was the most appropriate with respect to governance and funding of NG911.

0:14:35.070,0:14:39.880
Such that the ILECs would be responsible for the building, operation and maintenance of

0:14:39.880,0:14:41.630
the NG911 network.

0:14:41.630,0:14:45.790
So the Commission will retain full direct oversight over the ILEC's tariffs and the

0:14:45.790,0:14:51.130
tariff rates are to be established based on each NG911 network providers' costs, plus

0:14:51.130,0:14:52.920
an approved markup.

0:14:52.920,0:14:58.560
So in terms of actual delivery of NG911 services,
ILECs, as part of this decision, were directed

0:14:58.560,0:15:04.561
to establish their NG911 networks and be ready
to provide NG911 voice service by 3rd of June

0:15:04.561,0:15:09.550
2020 wherever PSAPs had been established in
a particular region.

0:15:09.550,0:15:15.440
As well, TSPs, which for the context of this
decision included telephone service providers

0:15:15.440,0:15:19.950
that offer wireline, wireless, local exchange
telephone services, including local VoIP service,

0:15:19.950,0:15:25.240
were directed to make the necessary changes
on their networks to support NG911 voice throughout

0:15:25.240,0:15:28.199
their operating territories by 3rd June 2020,
with a couple caveats.

0:15:28.199,0:15:34.120
So, this had to be done where the networks
were capable of doing so, and where PSAPs

0:15:34.120,0:15:36.519
had launched NG911 voice.

0:15:36.519,0:15:41.389
So we consider that the provision of NG911
voice is the foundation of the NG911 networks

0:15:41.389,0:15:46.170
and the launch of NG911 voice would have marked
the transition from the current system to

0:15:46.170,0:15:48.550
the NG system.

0:15:48.550,0:15:54.009
In terms of WSPs, they were directed to provide
RTT-based NG911 text messaging throughout

0:15:54.009,0:15:57.070
their operating territories by 31 December
2020.

0:15:57.070,0:16:02.449
With similar caveats to the NG911 voice being
that where their networks were capable of

0:16:02.449,0:16:06.110

doing so, and wherever PSAPs had launched NG911 text messaging.

0:16:06.110,0:16:12.759

So in terms of NG911 services, we consider that the NG911 text messaging based on RTT

0:16:12.759,0:16:19.240

would be the first new NG911 service, seeing as VoIP would be fairly transparent - one

0:16:19.240,0:16:24.190

transitions out to the other - but the NG911 text messaging would be a net new service.

0:16:24.190,0:16:26.329

And it would be available to all Canadians.

0:16:26.329,0:16:29.940

But I'll touch on that in an upcoming slide.

0:16:29.940,0:16:34.829

The Commission took a transitory approach to NG911 implementation and that for a three-year

0:16:34.829,0:16:43.190

period between June 30th, 2020 and June 30th, 2023, NG911 networks and current 911 networks

0:16:43.190,0:16:44.920

would exist concurrently.

0:16:44.920,0:16:51.380

And then after June 30, 2023, the current 9-1-1 networks would be decommissioned.

0:16:51.380,0:16:55.009

It's expected though that there are - may be still some service providers and PSAPs

0:16:55.009,0:17:00.080

that would not have transition to NG911 after the decommissioning date.

0:17:00.080,0:17:05.131

And for that reason, CRTC mandated that legacy gateways be employed to ensure that regardless

0:17:05.131,0:17:11.240

of what flavor of 911 exists in a particular network or at particular PSAPs, all 911 calls

0:17:11.240,0:17:15.540

will still make it to a PSAP when they're made.

0:17:15.540,0:17:20.280

The framework also established obligations on Bell Canada and TELUS to undertake NG911

0:17:20.280,0:17:26.079
laboratory trials and to conduct NG911 voice
and implementation trials with PSAPs and TSPs

0:17:26.079,0:17:28.350
in their respective operating territories.

0:17:28.350,0:17:33.960
And, we also imposed new obligations related
to reliability, security, privacy and outage

0:17:33.960,0:17:35.870
reporting and the like.

0:17:35.870,0:17:42.190
So, keep in mind all the dates that I just
said of course were imposed before the pandemic.

0:17:42.190,0:17:44.690
So we'll talk about that a bit later as
well.

0:17:44.690,0:17:49.330
There have been quite a few other decisions
that we published since 2017-182.

0:17:49.330,0:17:54.050
And I do have a couple of slides at the end
here that I won't really discuss but provide

0:17:54.050,0:18:01.560
some links to the supplementary and additional
decisions that augment the original framework.

0:18:01.560,0:18:10.010
So I'll leave you free to go through those
as you see fit as well on your own time.

0:18:10.010,0:18:13.230
Next slide please.

0:18:13.230,0:18:18.700
So just a snapshot of what Canada - what 911
looks like in Canada.

0:18:18.700,0:18:23.559
So most Canadians have access to either - well
most Canadians have access to enhanced 911,

0:18:23.559,0:18:30.390
though an estimated 2% still only have access
to basic 911 and another estimated 2% have

0:18:30.390,0:18:32.340
no 911 service whatsoever.

0:18:32.340,0:18:35.820
Instead relying on local phone numbers to

reach emergency services directly.

0:18:35.820,0:18:39.690

So this appears predominantly in more remote areas to the North and on certain areas on

0:18:39.690,0:18:44.390

our eastern coast where the population is less dense and where 911 authorities simply

0:18:44.390,0:18:48.429

have not established PSAPs for any given reason.

0:18:48.429,0:18:54.780

So as you can see from this map, the country is currently divided up into three major 911

0:18:54.780,0:18:59.309

network providers, those being Bell Canada whose territory ranges from the East coast

0:18:59.309,0:19:01.100

to the central Canada.

0:19:01.100,0:19:05.600

SaskTel who operates within the province of Saskatchewan, and TELUS who covers the

0:19:05.600,0:19:09.030

eastern province of Alberta and British Columbia.

0:19:09.030,0:19:13.610

Those areas in the north that are limited to basic 911 or local emergency numbers fall

0:19:13.610,0:19:16.210

mostly within the northwest TELUS territory.

0:19:16.210,0:19:21.940

In fact, some of the areas that have basic 911 in the north were only able to implement

0:19:21.940,0:19:24.330

the service within the last couple years as well.

0:19:24.330,0:19:30.110

So...some of these areas are still trying to transition to even basic 911, and this

0:19:30.110,0:19:35.980

despite the roadmap for NG911 having been established a few years prior.

0:19:35.980,0:19:41.690

Another key aspect of NG911 that this image illustrates that I want to touch on is that

0:19:41.690,0:19:44.060

Canada has adopted a national strategy for NG911.

0:19:44.060,0:19:51.370

And so the Canadian NG911 network was a group comprised of three ESInets for the whole country.

0:19:51.370,0:19:58.630

One each for our three 911 network providers which I know is different from what the U.S.

0:19:58.630,0:20:00.190

is doing.

0:20:00.190,0:20:01.190

Next slide please.

0:20:01.190,0:20:08.830

I forgot to mention the slide previous with the diagram was presented to us by Bell, Bell

0:20:08.830,0:20:09.830

Canada.

0:20:09.830,0:20:10.830

So give credit where credit is due.

0:20:10.830,0:20:16.480

So it is not our diagram and we thank Bell for providing it to us.

0:20:16.480,0:20:18.210

OK, so on to the next slide.

0:20:18.210,0:20:25.870

As I just mentioned a couple slides ago, Canada adopted a transitory approach to NG911 meaning

0:20:25.870,0:20:30.380

that there will be a period during which both current 911 networks will exist concurrent

0:20:30.380,0:20:32.760

to NG911 networks.

0:20:32.760,0:20:38.150

So this slide is obviously very high level, but it helps illustrate a few points.

0:20:38.150,0:20:44.390

One being that on the E911 network, the responsibility for the automatic numbering information and

0:20:44.390,0:20:49.210

automatic location information, ALI ANI, resides with the 911 network providers.

0:20:49.210,0:20:55.710

When we move to NG911, ALI and ANI will disappear and be replaced by the location information

0:20:55.710,0:21:01.830
server and the additional data repository,
so the LIS and ADR, and the responsibility

0:21:01.830,0:21:04.630
for these will reside with the TSPs.

0:21:04.630,0:21:12.080
That being said and the decision in the framework,
NG911 network providers have been mandated

0:21:12.080,0:21:16.900
to provide hosted lists on ADR functionalities
to those TSPs who would prefer to go the hosted

0:21:16.900,0:21:18.870
route.

0:21:18.870,0:21:24.059
As well during the transition, seeing as not
all TSPs and PSAPs will move to NG911 at the

0:21:24.059,0:21:29.159
same time, the Commission has mandated NG911
network providers to implement legacy selective

0:21:29.159,0:21:36.290
data routers, so LSRGs, in order to permit
the translation of legacy traffic to NG911

0:21:36.290,0:21:37.460
traffic.

0:21:37.460,0:21:40.980
Next slide please.

0:21:40.980,0:21:45.440
So we recognize that some TSPs will simply
not be technically capable of transitioning

0:21:45.440,0:21:47.440
to an IP-based system.

0:21:47.440,0:21:53.500
So as such, once the 911 network providers
decommission their basic and enhanced 911

0:21:53.500,0:22:00.210
networks in favor of full NG911, those TSPs
will be able to continue operating, but will

0:22:00.210,0:22:06.350
require a legacy network gateway in order
to interface with the NG911 network.

0:22:06.350,0:22:09.942

So similarly, we recognize the PSAPs also face a number of challenges with regards to

0:22:09.942,0:22:16.140
the move to the newer system, and that not all PSAPs will have transitioned to NG911

0:22:16.140,0:22:17.400
prior to decommissioning.

0:22:17.400,0:22:21.559
So they too have the option of implementing legacy PSAP gateways.

0:22:21.559,0:22:28.650
So, the Commission doesn't really encourage this approach or recommend it, but anyway,

0:22:28.650,0:22:35.120
in both cases for LNGs and LPGs, so the legacy network gateways and the legacy PSAP gateways,

0:22:35.120,0:22:39.930
the responsibility for implementing these gateways includes funding them and that will

0:22:39.930,0:22:46.290
lie with the TSPs and PSAPs who acquire them, respectively.

0:22:46.290,0:22:47.750
Next slide please.

0:22:47.750,0:22:53.960
So, we discussed how NG911 text messaging based on RTTs is going to be the first net

0:22:53.960,0:22:57.350
new service to Canadians with the transition to NG911.

0:22:57.350,0:23:03.390
So, in addition to NG911 voice services, we mandated in the NG911 framework that WSPs

0:23:03.390,0:23:07.140
provide the NG911 text messaging to their subscribers.

0:23:07.140,0:23:11.920
There are a few pre-conditions of course to being able to actually deploy the service

0:23:11.920,0:23:13.090
though.

0:23:13.090,0:23:17.480
As you can see on the screen here, mainly that the PSAP to which your 911 call will

0:23:17.480,0:23:23.490

be routed must be equipped to receive and exchange NG911 text messages with you.

0:23:23.490,0:23:29.060

You must also be in an area with voice over LTE coverage and it has to be an active feature

0:23:29.060,0:23:33.740

on the device, being that the phone you are using has to be compatible with the service

0:23:33.740,0:23:38.980

and has to have the proper functionality installed natively on it as opposed to being an over

0:23:38.980,0:23:40.390

the top service.

0:23:40.390,0:23:45.860

So this is important to us as the NG911 text messaging session will be treated as a wireless

0:23:45.860,0:23:50.870

call in both terms how it's routed and for the location information.

0:23:50.870,0:23:56.600

So we decided to put limitations on the over the top and have it be a native functionality

0:23:56.600,0:23:57.600

on the device.

0:23:57.600,0:24:02.841

So, assuming those conditions are met, the intent for NG911 text messaging is for it

0:24:02.841,0:24:04.440

to be accessible to all Canadians.

0:24:04.440,0:24:11.530

So, in that sense, it is not intended to be a direct replacement for TTY or anything else.

0:24:11.530,0:24:15.870

Next slide please.

0:24:15.870,0:24:20.080

So continuing with the theme of wireless service, the provision of location information for

0:24:20.080,0:24:27.200

wireless 911 calls has evolved from providing no location information on basic 911 to providing

0:24:27.200,0:24:32.380

detailed estimates of latitude and longitude

of locations of 911 calls made by wireless

0:24:32.380,0:24:36.529
handsets on the enhanced 911 service.

0:24:36.529,0:24:42.361
So this was done in stages and is reflected
in key decisions that resulted in Phase 1

0:24:42.361,0:24:45.250
Location Information being mandated in 2003.

0:24:45.250,0:24:49.120
Whereby location information for the call
was based on the cellular tower location.

0:24:49.120,0:24:54.370
Followed by Phase 2 Location Information being
mandated six years later in 2009, whereby

0:24:54.370,0:24:58.150
the location of the call is based on the location
of the calling telephone.

0:24:58.150,0:25:05.179
So just as important, along with the decisions
related to the details of location to be provided

0:25:05.179,0:25:10.169
on wireless 911 calls, the process for monitoring
the accuracy of wireless location information

0:25:10.169,0:25:11.799
was also mandated.

0:25:11.799,0:25:16.580
So through this monitoring process, the Commission
tracks wireless location accuracy on an annual

0:25:16.580,0:25:22.160
basis and we've seen continuous improvements
in overall results since 2009.

0:25:22.160,0:25:27.400
So with the implementation of Phase 1 and
Phase 2 location technology, not only has

0:25:27.400,0:25:32.770
the accuracy of location improved substantially,
but the percentage of accurate locates has

0:25:32.770,0:25:38.539
increased from about 50% to about 75% of wireless
calls made in Canada.

0:25:38.539,0:25:44.071
Further, with the implementation of handset
location technology, we anticipate that the

0:25:44.071,0:25:48.800
location of accurate locates will increase
yet again and that the percentage of accurate

0:25:48.800,0:25:52.510
locates is anticipated to increase to 90%.

0:25:52.510,0:25:57.920
Next slide please.

0:25:57.920,0:26:03.059
So there are currently four arenas in which
improvements of location information for 911

0:26:03.059,0:26:04.720
service has been addressed.

0:26:04.720,0:26:09.429
So with regards to headset-based location
technology implementation, the Emergency Services

0:26:09.429,0:26:14.600
Working Group has made recommendations related
to leveraging Apple and Google technologies

0:26:14.600,0:26:17.230
to improve handset-based locations.

0:26:17.230,0:26:23.610
For dispatchable location, we're exploring
methods for how to best provide dispatchable

0:26:23.610,0:26:28.380
location information from originating networks
to the PSAPs to ensure that the first responder

0:26:28.380,0:26:33.919
is being dispatched to the center of the emergency
with the most accurate location information.

0:26:33.919,0:26:40.221
In terms of GIS and addressing, which is looking
at the creation of NG911-compliant GIS data

0:26:40.221,0:26:47.590
models and the development of NENA i3 based
specific address format within the same context.

0:26:47.590,0:26:52.490
And Geo routing as well, which is looking
at the implementation of the mechanisms to

0:26:52.490,0:26:57.000
route emergency calls to the appropriate PSAP
based on geodetic information.

0:26:57.000,0:27:02.720
So all four projects are closely inter-related
with coordination managed by the ESWG and

0:27:02.720,0:27:08.429
there are ESWG subgroups in place including
representatives from each initiative to assess

0:27:08.429,0:27:13.450
cross impacts each project may have on each
other.

0:27:13.450,0:27:17.760
Next slide please.

0:27:17.760,0:27:22.140
So a few slides back I mentioned some of the
key dates that the Commission had established

0:27:22.140,0:27:27.549
for transition to NG911 as established in
the framework published in 2017.

0:27:27.549,0:27:32.580
I also briefly touched on the initiation of
the NG911 implementation trials.

0:27:32.580,0:27:38.340
So those saw Bell complete its first NG911
test call in September 2019 followed by its

0:27:38.340,0:27:42.559
first wireless NG911 test call on December
20, 2019.

0:27:42.559,0:27:47.940
So, moving forward past that, we are very
proud of the accomplishments that have been

0:27:47.940,0:27:49.799
made so far.

0:27:49.799,0:27:56.299
But, as with everybody else as we move forward
closer to our launch date in 2020, all things

0:27:56.299,0:28:01.710
considered, they are going pretty well and
we were pretty much on target to hit our launch

0:28:01.710,0:28:03.049
date until.....

0:28:03.049,0:28:04.769
Next Slide....

0:28:04.769,0:28:08.220
COVID happened.

0:28:08.220,0:28:12.000
So obviously this threw a wrench - a vital
wrench into the works.

0:28:12.000,0:28:18.590

So we were set up for launch of NG911 voice in summer 2020, but just prior to that in

0:28:18.590,0:28:23.519

March, of course, COVID happened and threw a wrench into everything and kind of slowed

0:28:23.519,0:28:24.519

us down here.

0:28:24.519,0:28:27.769

So moving on to the next slide.

0:28:27.769,0:28:33.530

So by the end of March of 2020, just a couple of months before we were set to launch NG911

0:28:33.530,0:28:38.590

voice, it was clear that 911 stakeholders were feeling the crunch of the pandemic.

0:28:38.590,0:28:43.380

And we understood that with respect to NG911, the maintenance of the current 911 network

0:28:43.380,0:28:48.559

was being prioritized over work related to the deployment of the NG911 network.

0:28:48.559,0:28:53.470

So in April, the Commission rapidly suspended all the deadlines established as part of the

0:28:53.470,0:28:55.559

NG911 framework.

0:28:55.559,0:29:02.190

Work continued at ESWG albeit at a slower pace, so by late summer people had become

0:29:02.190,0:29:06.159

more or less accustomed to the new normal.

0:29:06.159,0:29:09.580

And so the Commission launched a notice of consultation in order to seek views from the

0:29:09.580,0:29:15.530

public, including NG911 network providers, local and providential governments, TSPs,

0:29:15.530,0:29:17.470

PSAPs and vendors.

0:29:17.470,0:29:22.460

So we launched an NOC seeking their views on new launch dates for NG911.

0:29:22.460,0:29:28.890

So the record for this closed in January and the Commission decision, which will include

0:29:28.890,0:29:35.690

new dates for the important milestones for our, for NG911 implementation is upcoming.

0:29:35.690,0:29:42.690

So notwithstanding, NG911 stakeholders continue to work toward the implementation of NG911.

0:29:42.690,0:29:46.950

Including carrying on with technical voice trials, finalizing the core next-generation

0:29:46.950,0:29:52.779

services infrastructure, and working through various other issues raised and discussed

0:29:52.779,0:29:53.779

at ESWG.

0:29:53.779,0:29:59.480

So all this to say that we hit a wall just like everybody else in various other areas

0:29:59.480,0:30:00.990

due to COVID.

0:30:00.990,0:30:03.200

We had to put a halt to everything.

0:30:03.200,0:30:11.519

We lost the proceeding and we're looking now to release our - the new dates fairly

0:30:11.519,0:30:13.230

shortly.

0:30:13.230,0:30:18.370

Next slide please.

0:30:18.370,0:30:23.960

So, with COVID-19 pandemic aside, there have been an number of challenges that we've encountered

0:30:23.960,0:30:27.230

since we first set out to implement NG.

0:30:27.230,0:30:31.900

So a couple of highlights here, so in terms of standards one of the challenges that we

0:30:31.900,0:30:38.750

faced had to do with the implementation being dependent on standards development bodies,

0:30:38.750,0:30:40.470
development cycles.

0:30:40.470,0:30:44.720
So when the Commission first announced that they would be adopting the NENA i3 standard

0:30:44.720,0:30:47.230
for NG911, it was currently version 1.

0:30:47.230,0:30:52.789
And at the moment we are kind of in between standards, as you might say, given that v2

0:30:52.789,0:30:56.500
is the current accepted standard but v3 is in development and nearly finalized.

0:30:56.500,0:31:01.700
So prior to when we implemented - I'm sorry when we released the decision to publish

0:31:01.700,0:31:07.960
- when we published the decision to move to NG911 we were at version 1, right now the

0:31:07.960,0:31:11.760
work is being done in accordance to version 2 given as the current accepted standard,

0:31:11.760,0:31:13.300
but we know version 3 is coming.

0:31:13.300,0:31:19.899
So it has kind of provided us with a bit of a challenge in terms of what standard are

0:31:19.899,0:31:20.899
we developing too.

0:31:20.899,0:31:24.649
Do we stay now and make a bunch of changes moving forward, or do we try to implement

0:31:24.649,0:31:28.590
as much of V3 as soon as possible even though it hasn't been finalized yet.

0:31:28.590,0:31:34.790
So yes, all is to say that it has led to complications with regards to specifications to which the

0:31:34.790,0:31:37.700
networks will be built.

0:31:37.700,0:31:40.480
Stakeholders want to move as quickly as they can to implement the system, but they don't

0:31:40.480,0:31:44.870
want to have to implement massive changes
down the road if that can be avoided.

0:31:44.870,0:31:49.240
In addition, vendors want to ensure they have
a rock solid standard to which they will develop

0:31:49.240,0:31:50.240
their products.

0:31:50.240,0:31:53.210
All the while creating something that can
be deployed on the American market as well.

0:31:53.210,0:31:57.929
So it's a great challenge with respect to
developing implementation timelines as well

0:31:57.929,0:32:00.190
as having to finalize some key standards.

0:32:00.190,0:32:05.120
So, for example standards for RTT functionality,
such as RTT callback and RTT bridging have

0:32:05.120,0:32:06.420
yet to be finalized as well.

0:32:06.420,0:32:12.470
So this kind of throws a wrench into a lot
of things here.

0:32:12.470,0:32:16.820
There's also the question with respect to
ensuring the standards reflect the Canadian

0:32:16.820,0:32:17.820
landscape.

0:32:17.820,0:32:18.820
Right?

0:32:18.820,0:32:22.659
So given that Canada has two official languages,
there's a requirement for us to have to

0:32:22.659,0:32:26.730
"recognize" the otherwise USA-focused
NENA i3 standards to fit the Canadian the

0:32:26.730,0:32:27.730
way of doing things.

0:32:27.730,0:32:33.010
So this includes having location information
being available in both traditional languages

0:32:33.010,0:32:34.080

as well as using Canadian terminology.

0:32:34.080,0:32:41.309

So for example, some of the fields and standards where U.S. has ZIP codes and states, we have

0:32:41.309,0:32:46.370

postal codes and providences and territories, so adjustments need to be made on that front

0:32:46.370,0:32:47.370

as well.

0:32:47.370,0:32:51.799

So in terms of collaboration, we've learned that collaboration is key for an effective

0:32:51.799,0:32:53.620

and uniform system.

0:32:53.620,0:32:59.130

So this ESWG has been instrumental of the development of an NG911 implementation plan.

0:32:59.130,0:33:03.990

So here we have a forum of experts who are often competitors in other contexts, and they

0:33:03.990,0:33:08.049

are all collaborating for the sole purpose of providing the best emergency communications

0:33:08.049,0:33:09.820

network as possible for Canadians.

0:33:09.820,0:33:13.750

So from identifying and resolving technical and operational issues to ensuring national

0:33:13.750,0:33:19.090

consistency, the collaboration between 911 stakeholders is key and beyond beneficial

0:33:19.090,0:33:20.090

too.

0:33:20.090,0:33:25.330

So while different aspects of implementing NG911 are defined in projects separately at

0:33:25.330,0:33:31.571

first, it also becomes quickly apparent that - especially as projects come to close, come

0:33:31.571,0:33:38.269

close to completion - the very close relationship that exists between them and the comprehensive

0:33:38.269,0:33:44.440

coordination that is required to understand the cross impacts is very instrumental for

0:33:44.440,0:33:47.830
them to be completed successfully.

0:33:47.830,0:33:49.410
Just lastly touching on time here.

0:33:49.410,0:33:54.289
So hindsight being 2020, there's been a realization that the time required for certain

0:33:54.289,0:33:58.960
behind the scenes NG911 work cannot be underestimated.

0:33:58.960,0:34:03.460
So for example, industry has raised issues with regards to delays due to limited experience

0:34:03.460,0:34:10.290
in IP networks interconnection at the carrier level, as well as limited experience in IP

0:34:10.290,0:34:14.790
network in cybersecurity, encryption, DNS-based routing for the majority of stakeholders.

0:34:14.790,0:34:19.170
So getting caught up on these aspects and understanding how they apply to the NG911

0:34:19.170,0:34:23.220
context takes time and must be planned for.

0:34:23.220,0:34:26.950
And lastly, time is also required for the effective testing of major functionalities

0:34:26.950,0:34:28.930
and interoperability.

0:34:28.930,0:34:33.890
And there has to be clarity with respect to the exact purpose and scope of the trials.

0:34:33.890,0:34:38.210
So we learnt that, in an effort to ensure that the next-generation system was as effective

0:34:38.210,0:34:42.880
as possible, it's quite easy to go overboard with the number of tests.

0:34:42.880,0:34:46.430
So for us, at one point we had somewhere close to 90,000 test cases.

0:34:46.430,0:34:51.770

But with proper consultation and collaboration that number was significantly whittled down.

0:34:51.770,0:34:55.240

And in addition to the complexity and high-level of integration required between equipment

0:34:55.240,0:34:59.440

and vendors, it increased the complexity of testing and time required to address arising

0:34:59.440,0:35:01.760

issues as well.

0:35:01.760,0:35:02.760

So time is key.

0:35:02.760,0:35:03.770

Make sure you have enough of it.

0:35:03.770,0:35:08.000

I guess that's the take away from this particular slide here.

0:35:08.000,0:35:09.000

OK.

0:35:09.000,0:35:10.460

So the next slide is our last one here.

0:35:10.460,0:35:17.869

So notwithstanding all the challenges and COVID and all that, we're happy to say that

0:35:17.869,0:35:20.690

we are very proud of the progress that Canada has made on this front.

0:35:20.690,0:35:27.190

So we consider ourselves a leader in NG911 implementation at least on a national scale.

0:35:27.190,0:35:30.850

And, we're also quite proud of the great relationship and collaboration that exists

0:35:30.850,0:35:34.810

between the Commission and 911 stakeholders.

0:35:34.810,0:35:36.500

So, collaboration is key.

0:35:36.500,0:35:41.450

You need enough time and make sure your standards are aligned with what it is you are trying

0:35:41.450,0:35:42.490

to do.

0:35:42.490,0:35:47.220

So, that brings our presentation to a close here.

0:35:47.220,0:35:50.710

So on behalf of the CRTC, I thank you for having given me your attention for these last

0:35:50.710,0:35:52.510

20 minutes.

0:35:52.510,0:35:58.820

Time permitting my team and I will now take care of questions for the time remaining.

0:35:58.820,0:35:59.880

Thank you Etienne.

0:35:59.880,0:36:05.440

So as he mentioned we're going to start the Q&A portion of our session.

0:36:05.440,0:36:10.650

And as a reminder if you would like to ask a question, please use GoToWebinar's question

0:36:10.650,0:36:13.430

feature or press the raise the hand button.

0:36:13.430,0:36:18.850

With that, I will ask Sheila to ask our first question.

0:36:18.850,0:36:22.780

Thank you Sherri.

0:36:22.780,0:36:29.470

Our first question is asking, are there penalties for the carriers if they don't transition

0:36:29.470,0:36:33.810

to NG in your timeframe?

0:36:33.810,0:36:44.100

>> Sorry I'm on mute, so yes - that's ok.

0:36:44.100,0:36:45.700

So just in general...

0:36:45.700,0:36:52.300

You're talking about specificities of what there would be - So yes, in general

0:36:52.300,0:37:00.700

when the CRTC inflicts directions on carriers or any of the entities within our jurisdiction

0:37:00.700,0:37:08.610

there is a way, there is a way for the Commission to impose penalties on those entities.

0:37:08.610,0:37:13.790

So if they are not found to be compliant with any of the Commission's directions then the

0:37:13.790,0:37:16.570

Commission reserves the right to implement penalties in that case.

0:37:16.570,0:37:23.870

So that would apply to NG911 as well.

0:37:23.870,0:37:24.870

Thank you.

0:37:24.870,0:37:32.240

Do you have lessons learned that you can share from the test calls that you completed?

0:37:32.240,0:37:37.470

Perhaps I will pass that one off to Mylene.

0:37:37.470,0:37:44.080

She has more granularity on that than I do.

0:37:44.080,0:37:47.190

Thanks Joel, its Mylene - I was looking at Joel's text.

0:37:47.190,0:37:53.520

The ESWG is currently working on status reports that will include some of those results and

0:37:53.520,0:37:56.070

as soon as that's released it will be publicly available.

0:37:56.070,0:38:02.200

So you will be welcomed to look at that when it gets published.

0:38:02.200,0:38:03.200

>>

0:38:03.200,0:38:14.420

Ok, so thank you.

0:38:14.420,0:38:23.940

And because of time, if we do have other questions, we will send those to Etienne and his team

0:38:23.940,0:38:31.850

after the webinar and we will provide answers to you once the files are posted on 911.gov.

0:38:31.850,0:38:39.570

With that, I want to ask Laurie to now introduce

our next speaker, Mike Sunseri.

0:38:39.570,0:38:41.280
Thanks Sherri.

0:38:41.280,0:38:48.150
So our next speaker is the deputy executive director with Kentucky's Office of Homeland

0:38:48.150,0:38:49.150
Security.

0:38:49.150,0:38:52.670
He is the administrator of the Kentucky 911 Services Board.

0:38:52.670,0:38:59.410
His name is Mike Sunseri and he'll be talking about the certification protocols that Kentucky

0:38:59.410,0:39:00.410
has established.

0:39:00.410,0:39:02.480
Mike, thanks you for being with us today.

0:39:02.480,0:39:04.180
And please, the floor is yours.

0:39:04.180,0:39:08.500
Thank you Laurie for the introduction, and next slide please.

0:39:08.500,0:39:12.890
And I'm also grateful that our friends to the North went a little long because a FedEx

0:39:12.890,0:39:17.970
delivery just came not two minutes ago and you missed our attack golden retriever freaking

0:39:17.970,0:39:19.450
out and disrupting everything.

0:39:19.450,0:39:21.510
So that worked out really well for everyone.

0:39:21.510,0:39:26.160
Alright, so let's talk about Kentucky's PSAPs certification process.

0:39:26.160,0:39:32.430
So, Kentucky implemented this process to delineate those PSAPs that were able to handle wireless

0:39:32.430,0:39:36.620
delivery of 911 calls with an incentive program.

0:39:36.620,0:39:42.080

So it's important to first take a brief step back and look at how 911 is funded in

0:39:42.080,0:39:43.720
the Commonwealth.

0:39:43.720,0:39:48.110
There is a three legged stool essentially that funds 911 operations.

0:39:48.110,0:39:55.120
The first being the fees originated from land lines, that also includes VoIP.

0:39:55.120,0:40:00.010
The second leg would be general fund appropriations from a city or county government.

0:40:00.010,0:40:07.120
And, the third would be fees derived from the wireless CMRS service.

0:40:07.120,0:40:16.090
So, originally back, before cell phones, all 911 funding was set, collected and spent at

0:40:16.090,0:40:17.870
a local level.

0:40:17.870,0:40:22.860
Kentucky is unusual in that even though we are a small rural state with just barely 4.5

0:40:22.860,0:40:31.210
million people in our state, we have 120 counties which means we have 120 little fiefdoms of

0:40:31.210,0:40:34.500
local government which makes things a challenge.

0:40:34.500,0:40:40.620
So, with so many counties and then cities within those counties, 25-30 years ago there

0:40:40.620,0:40:45.490
were more than 400 PSAPs that operated within the Commonwealth at a city and county level

0:40:45.490,0:40:48.120
including universities, airports.

0:40:48.120,0:40:55.530
So with the advent of cellular technology, municipalities eventually determined that

0:40:55.530,0:41:01.200
it was going to be too much of a hassle to try to collect 911 fees from the ever-increasing

0:41:01.200,0:41:03.410
number of wireless providers.

0:41:03.410,0:41:07.270
It was one thing back in the landline days
where they had one or maybe two telcos providing

0:41:07.270,0:41:13.540
that service but when you had 2, 4, 6 then
12 then 24 different wireless providers, they

0:41:13.540,0:41:15.540
realized they were going to need some help.

0:41:15.540,0:41:24.890
And so the wireless portion only was collectivized
into a statewide collection methodology.

0:41:24.890,0:41:28.520
So the 911 Services Board was born, much like
our friends to the North, they have limited

0:41:28.520,0:41:31.770
regulatory authority over local PSAP operations.

0:41:31.770,0:41:35.130
It's similar in Kentucky.

0:41:35.130,0:41:42.560
The 911 Services Board was given the authority
to collect CMRS 911 fees on a statewide level

0:41:42.560,0:41:46.290
and then disperse those out through a statutory
formula.

0:41:46.290,0:41:52.140
However, day-to-day PSAP operations are all
managed including equipment choices at a local

0:41:52.140,0:41:53.750
level.

0:41:53.750,0:41:58.760
And that will eventually begin to transition
as we continue our path along to statewide

0:41:58.760,0:41:59.800
NG911.

0:41:59.800,0:42:05.750
However, as it is now, the 911 Services Board
only has the authority for the collection

0:42:05.750,0:42:08.810
and dispersal of wireless 911 fees.

0:42:08.810,0:42:15.390
So our current fee rate is \$.70 a month that

is submitted and collected by the providers

0:42:15.390,0:42:17.460

and then passed along to the board.

0:42:17.460,0:42:22.790

And then prepaid is at a rate at \$.93 per transaction which is collected at point of

0:42:22.790,0:42:31.210

sale along with sales tax by retailers and then that is pushed to the 911 board electronically,

0:42:31.210,0:42:32.210

as well.

0:42:32.210,0:42:40.100

So all together we collect about \$34 million a year in wireless 911 fees of which 97.5

0:42:40.100,0:42:45.940

cents goes right back out to PSAPs in one way shape or form or another.

0:42:45.940,0:42:52.970

That represents about 35% to 40% of all of the funding for PSAP operations in the Commonwealth.

0:42:52.970,0:43:01.880

So by the - the evolution to wireless technology and the requiring PSAPs be able to handle

0:43:01.880,0:43:07.250

the wireless calls resulted in a radical reduction in the number of PSAPs.

0:43:07.250,0:43:12.780

As I mentioned earlier, we had more than 400 some 25 years ago.

0:43:12.780,0:43:19.450

We now have 117 which is still a lot of PSAPs for a small state but there was a significant

0:43:19.450,0:43:22.650

intra-County reduction of PSAPs.

0:43:22.650,0:43:25.950

Next slide please.

0:43:25.950,0:43:32.050

So ,initially when a PSAP wanted to begin accessing wireless or CMRS fees they submitted

0:43:32.050,0:43:37.160

a lengthy paper-based application.

0:43:37.160,0:43:40.960

And as you can imagine, with all the forms

that would be attached and required it was

0:43:40.960,0:43:43.910

an inefficient, time-consuming, and frustrating process.

0:43:43.910,0:43:51.100

In 2018, we adopted a web-based electronic submission protocol using a product called

0:43:51.100,0:43:52.200

Smartsheet.

0:43:52.200,0:43:54.630

That cost us about \$1800 a year.

0:43:54.630,0:44:01.800

That gives us six licensed users or administrators and it provides a dynamic, real-time, efficient,

0:44:01.800,0:44:09.750

really a highly streamlined method of submitting on the PSAP end and processing on our end.

0:44:09.750,0:44:12.060

Next slide please.

0:44:12.060,0:44:15.910

So let's dive right into how it works.

0:44:15.910,0:44:20.550

I've got some screen grabs on here, but we're going to attempt to go over and have

0:44:20.550,0:44:22.030

me show this to you live.

0:44:22.030,0:44:27.440

So, if you could please transfer over.

0:44:27.440,0:44:29.950

Excellent.

0:44:29.950,0:44:35.070

So when a PSAP expresses interest in becoming Board certified which, again, allows them

0:44:35.070,0:44:43.150

access to their share of the \$34 million a year, we send them out a Word doc with some

0:44:43.150,0:44:49.100

embedded links along with a portal, a web address, that will take them to the actual

0:44:49.100,0:44:50.100

portal.

0:44:50.100,0:44:53.970

So this is the one thing that is potentially paper-based, and they can still use it electronically.

0:44:53.970,0:44:59.250

So this outlines all the required elements to become board certified.

0:44:59.250,0:45:04.840

And it is broken up into four sections and you can see there are 12 elements in section

0:45:04.840,0:45:10.490

A. There are the mapping section, there are with multiple elements.

0:45:10.490,0:45:15.370

And then in the survey of their equipment, multiple sections.

0:45:15.370,0:45:20.760

And then in section D operations, just to get a good grasp of how they operate, there

0:45:20.760,0:45:22.650

are another seven sections.

0:45:22.650,0:45:27.480

So, a lot of moving pieces, a lot of elements, and it's a pretty lengthy and comprehensive

0:45:27.480,0:45:32.550

process to ensure that they have all of the equipment and procedures and protocols in

0:45:32.550,0:45:40.580

place to be able to provide effective and efficient 911 delivery of services.

0:45:40.580,0:45:43.210

So let's switch over and look at the actual portal.

0:45:43.210,0:45:47.500

So, when the PSAPs goes to this portal they are going to see the same thing that was on

0:45:47.500,0:45:50.920

this Word doc, but is now in the dynamic Smartsheet.

0:45:50.920,0:45:56.930

So if they start here at Section A1, complete their PSAP survey and contact info that launches

0:45:56.930,0:46:01.520

another page which then has multiple elements to it.

0:46:01.520,0:46:05.470

Now this PSAP survey is something that we

require from all board-certifieds to complete

0:46:05.470,0:46:06.470
on an annual basis.

0:46:06.470,0:46:09.180
That is a condition of their recertification.

0:46:09.180,0:46:16.070
So this is going to get that same information
from these PSAPs that are applying for certification.

0:46:16.070,0:46:20.320
And this just takes them to a link and gives
them some general information on how to prepare

0:46:20.320,0:46:25.030
for that and then to complete it.

0:46:25.030,0:46:30.170
So what they are going to do is work their
way through all these different elements.

0:46:30.170,0:46:37.450
And as they do, we actually get notification
on our end through a back-end service that

0:46:37.450,0:46:43.241
gives us a checklist of -- this is an example
of Fulton County, a rural county out in Western

0:46:43.241,0:46:44.960
Kentucky, and one of our last ones to become
certified.

0:46:44.960,0:46:49.630
It gives a snapshot of where they stand in
the certification process.

0:46:49.630,0:46:55.010
So it gives us the ability to know at a glance
exactly where they stand and the ability to

0:46:55.010,0:47:01.110
put in notes of their submission as they proceed.

0:47:01.110,0:47:05.280
So this gives us real-time access to where
they are in the process and we have the ability

0:47:05.280,0:47:10.690
to validate and verify every element of their
application.

0:47:10.690,0:47:21.150
And, I just want to show one other element.

0:47:21.150,0:47:26.120
As we transition to next generation readiness

we're putting a lot of emphasis into our

0:47:26.120,0:47:28.260
mapping requirements.

0:47:28.260,0:47:35.370
Initially PSAPs were required to submit a
jurisdictional boundary, their emergency service

0:47:35.370,0:47:37.510
boundaries and road centerlines.

0:47:37.510,0:47:44.620
We are adding on site and structure address
points for the first time this summer.

0:47:44.620,0:47:49.730
July 1st is the first deadline for submitting
address points on occupiable structures.

0:47:49.730,0:47:53.930
So that has been integrated into our mapping
requirements.

0:47:53.930,0:47:58.980
So that may, eventually down the road, lead
to some additional consolidation as PSAPs

0:47:58.980,0:48:05.430
determined they are better served by pulling
resources to meet these more stringent requirements.

0:48:05.430,0:48:13.110
So, at this point, I will kick it back over
to the slide deck.

0:48:13.110,0:48:20.170
I will stop sharing my screen.

0:48:20.170,0:48:23.650
Excellent.

0:48:23.650,0:48:29.650
Oh, I am not seeing the slide deck.

0:48:29.650,0:48:32.620
There we go.

0:48:32.620,0:48:36.660
Alright, next slide please and one more.

0:48:36.660,0:48:37.660
Perfect.

0:48:37.660,0:48:43.840
OK, so once a PSAP has submitted and gone
through the application process, one of the

0:48:43.840,0:48:46.000

final steps we will do is engage a site visit.

0:48:46.000,0:48:50.470

We'll bring PSAP directors from neighboring PSAPS or perhaps other areas of the state,

0:48:50.470,0:48:56.120

911 Services Board staff - as long as - along with the Board's technical consultant, and

0:48:56.120,0:49:01.690

we will do an actual site visit and have them walk us through their procedures, protocols,

0:49:01.690,0:49:06.260

continuity of operation plans, and view their equipment in the works.

0:49:06.260,0:49:11.370

And, the final step before we bring it for formal board approval would be to conduct

0:49:11.370,0:49:12.960

a geospatial audit.

0:49:12.960,0:49:14.650

We have a contracted firm.

0:49:14.650,0:49:20.500

The board pays for the first one and they will select 20 random points around the jurisdictional

0:49:20.500,0:49:22.600

area, typically that is a county.

0:49:22.600,0:49:25.680

So they will do a mix of city and county points.

0:49:25.680,0:49:31.670

They'll make a phone call to the PSAP and they'll see where it plots in the CAD.

0:49:31.670,0:49:37.620

So, under the current requirements 90% of those points must plot within a 10th of a

0:49:37.620,0:49:38.620

mile.

0:49:38.620,0:49:42.320

However, beginning the summer as we implement our site and structure address point elements

0:49:42.320,0:49:48.810

to our required mapping guidelines, those accuracy requirements will narrow down to

0:49:48.810,0:49:51.460

33 feet at 90%.

0:49:51.460,0:49:55.880

So that's going to put a good burden on PSAPs that are applying.

0:49:55.880,0:50:00.850

However, that is where we need to be for the Next Generation 911 delivery.

0:50:00.850,0:50:06.200

So, we are excited for the increase in the caller location accuracy and being able to

0:50:06.200,0:50:09.070

plot, and we're thrilled that we are moving along the path.

0:50:09.070,0:50:15.120

Then the final step is to bring it before the 911 Services Board which must vote on

0:50:15.120,0:50:19.920

either to give them a conditional approach if they maybe met 95% of the elements but

0:50:19.920,0:50:22.470

they might have one minor technicality outstanding.

0:50:22.470,0:50:26.860

They may elect to provide conditional approval as the board meets quarterly.

0:50:26.860,0:50:32.540

They may say, well, we'll go ahead and give you conditional support, or conditional approval,

0:50:32.540,0:50:36.870

you meet this last requirement and then you will be eligible to start accessing those

0:50:36.870,0:50:40.760

board funds on a quarterly basis.

0:50:40.760,0:50:46.740

So that concludes my presentation and I will be happy to answer any questions anyone might

0:50:46.740,0:50:50.840

have about Kentucky's PSAP Certification Protocols.

0:50:50.840,0:50:54.270

Alright, thank you Mike.

0:50:54.270,0:50:59.180

So once again we'll start the Q&A portion of our session.

0:50:59.180,0:51:06.620

As a reminder to ask a question you can use

GoToWebinar's chat feature or press the

0:51:06.620,0:51:09.940
raise your hand button and we will unmute
your line.

0:51:09.940,0:51:13.710
With that, I'll turn it over to you Sheila.

0:51:13.710,0:51:17.310
Thank you Sherri.

0:51:17.310,0:51:25.470
Mike, our first question is in regard to the
certification requirements, and were any stakeholders

0:51:25.470,0:51:29.580
involved in determining the PSAP certification
requirements?

0:51:29.580,0:51:33.390
That's a great question, and absolutely.

0:51:33.390,0:51:39.690
So, in addition to our 911 Services Board
which does have PSAP representation, we also

0:51:39.690,0:51:49.010
formed in 2018 a 911 Advisory Council which
is a 13-member group that has a significant

0:51:49.010,0:51:55.090
representation in both - not just both - the
PSAP community, as well as the first responder

0:51:55.090,0:51:58.520
community and the local government community.

0:51:58.520,0:52:06.940
So all people who are impacted and affected
by 911 operations are represented in that

0:52:06.940,0:52:13.990
working group and they act as what used to
be the committee level work of establishing

0:52:13.990,0:52:18.060
procedures, protocols, reviewing potential
board actions, it all goes to through the

0:52:18.060,0:52:23.120
Advisory Council and then it is pushed up
to the 911 Services Board for final approval.

0:52:23.120,0:52:29.750
So we are big believers in collaboration and
engaging stakeholders at every step of the

0:52:29.750,0:52:31.630

way.

0:52:31.630,0:52:35.390

Thank you.

0:52:35.390,0:52:42.910

What challenges are presenting from the evolving human resources demand and training necessitated

0:52:42.910,0:52:47.940

by the new NG911 duties and responsibilities?

0:52:47.940,0:52:49.900

That's a great question.

0:52:49.900,0:52:53.880

And staffing is an issue, not just in Kentucky but its nationwide.

0:52:53.880,0:53:00.000

But we have many, especially in our smaller, more rural PSAPs, who are struggling to find

0:53:00.000,0:53:01.420

staff to work as telecommunicators.

0:53:01.420,0:53:07.400

And, as you can imagine with as many PSAPs as we have, there is often the case where

0:53:07.400,0:53:11.740

neighboring counties are competing for the same employee pool.

0:53:11.740,0:53:19.210

And, with the addition of these enhanced mapping requirements, that does potentially place,

0:53:19.210,0:53:23.380

well it will place a greater burden especially on those rural areas.

0:53:23.380,0:53:29.160

Now, Kentucky is a little bit unusual in that we do require all full-time telecommunicators

0:53:29.160,0:53:34.870

to go through a formal training regimen that is conducted through our Department of Criminal

0:53:34.870,0:53:35.880

Justice training.

0:53:35.880,0:53:38.990

It is a four-week residential program.

0:53:38.990,0:53:45.000

And then they do that to become, to maintain the eligibility to be a full-time telecommunicator.

0:53:45.000,0:53:47.590
So training is very big in Kentucky.

0:53:47.590,0:53:52.570
It's a bit of a challenge for the entity that provides that training because we do not have

0:53:52.570,0:53:57.700
a statewide NG911 system up in place yet.

0:53:57.700,0:54:02.170
Everyone is essentially doing their own thing as far as equipment and procurement.

0:54:02.170,0:54:06.990
So, they are having to train based on equipment that may not be at the home shop.

0:54:06.990,0:54:11.100
So we are doing our best to coordinate with them to try and come up with as many things

0:54:11.100,0:54:15.650
that we can train on a statewide basis as possible that are applicable for all participants

0:54:15.650,0:54:16.650
in the training program.

0:54:16.650,0:54:20.800
But it is a legitimate challenge.

0:54:20.800,0:54:31.140
The next question is asking, if it would be possible to obtain a copy of the NG911 Mapping

0:54:31.140,0:54:36.290
Guide for Kentucky to use as a sample resource?

0:54:36.290,0:54:37.580
Absolutely.

0:54:37.580,0:54:49.760
If you were to go ... 911Board.KY.gov , and that is the 911 Services Board's main page,

0:54:49.760,0:54:55.270
there is a section called mapping file resources and deadlines and that will bring you to a

0:54:55.270,0:55:03.560
link that has all of our NG911 mapping guide as well as a host of mapping resources.

0:55:03.560,0:55:08.530
And that product was, again we talk about collaboration, the majority of the lifting

0:55:08.530,0:55:11.110
for that was done by the PSAP community.

0:55:11.110,0:55:16.620
So it was created through our 911 Advisory
Council which was led, that workgroup was

0:55:16.620,0:55:23.510
led by a PSAP director and it was pushed and
vetted through the two 911 staff associations,

0:55:23.510,0:55:25.170
KENA and APCO.

0:55:25.170,0:55:30.640
KENA being the Kentucky chapter of NENA and
Kentucky APCO, before it was even brought

0:55:30.640,0:55:31.640
to the Board.

0:55:31.640,0:55:35.840
So again, it shows, stresses the importance
of that collaborative process.

0:55:35.840,0:55:38.940
So there was buy-in from the community all
the way through the process.

0:55:38.940,0:55:44.800
And rather than the State developing these
procedures and protocols and then surprising

0:55:44.800,0:55:52.430
or dropping them on the community without
any input.

0:55:52.430,0:56:00.020
Our next question is asking, what has been
the biggest challenge in your NG911 journey,

0:56:00.020,0:56:04.060
and what is the most positive "aha" moment?

0:56:04.060,0:56:12.760
Well, the most challenging has been most definitely
the challenges of procurement.

0:56:12.760,0:56:16.280
So procurement is always a lengthy process.

0:56:16.280,0:56:19.500
It is in, I imagine in most every state.

0:56:19.500,0:56:23.980
And then as our friends in Canada explained
COVID came along and took what is normally

0:56:23.980,0:56:32.080

a painstakingly slow process and increased the length and frustration level exponentially.

0:56:32.080,0:56:38.850

So we are 18 months, probably 19 months now, into our procurement for our federal NG911

0:56:38.850,0:56:39.850

grant.

0:56:39.850,0:56:45.270

As we are investing heavily in a GIS integration solution that will be taking all the locally

0:56:45.270,0:56:51.550

acquired data sets from our 117 certified PSAPs doing quality assurance, quality control

0:56:51.550,0:56:57.430

and then using the end product to form the first ever statewide data set.

0:56:57.430,0:56:59.390

We're very excited about that.

0:56:59.390,0:57:04.710

The second element of our project is a supplemental data portal that will create a window into

0:57:04.710,0:57:09.830

every PSAP in the Commonwealth, every certified PSAP, that will be able to share that statewide

0:57:09.830,0:57:14.640

mapping information along with other supplemental data such as advanced location information,

0:57:14.640,0:57:21.470

caller location information, potential statewide text-to-911 solution, and analytics that can

0:57:21.470,0:57:23.350

be pushed back to the Board.

0:57:23.350,0:57:32.230

So just the procurement method has been really frustrating.

0:57:32.230,0:57:36.680

We are actually hoping this week to finalize the second element of that procurement and

0:57:36.680,0:57:39.420

really start fully venturing forward ahead.

0:57:39.420,0:57:45.510

As far as a big "aha" moment, it's really been I would say a series of little ones.

0:57:45.510,0:57:50.090

By reaching out to other states to find out how they've gone along this journey, it's

0:57:50.090,0:57:51.460

been very helpful for us.

0:57:51.460,0:57:56.170

In some ways it's helpful not to be blazing the trail.

0:57:56.170,0:58:01.610

So we've been able to take advantage of a lot of best practices learned and avoid a

0:58:01.610,0:58:05.910

lot of mistakes that those who went before us, unfortunately as trail blazers had to

0:58:05.910,0:58:06.910

make.

0:58:06.910,0:58:12.370

So we are more than happy to cut, copy and paste and take advantage of the knowledge

0:58:12.370,0:58:13.930

that other states have learned.

0:58:13.930,0:58:18.151

And, of course every state that we've ever reached out to has been wonderful as far as

0:58:18.151,0:58:23.380

sharing information with us and helping us as a partner in our journey.

0:58:23.380,0:58:27.940

And, our last question for today.

0:58:27.940,0:58:36.670

Do you plan to do cybersecurity audits for PSAPs, and do you have an incident command

0:58:36.670,0:58:41.390

system to respond to any cyber attacks?

0:58:41.390,0:58:44.160

That's another really good question.

0:58:44.160,0:58:52.850

Again, that's something as we transition from this 117 silos over to a statewide NG911 system

0:58:52.850,0:59:01.680

and we're getting ready to talk about potentially putting out an RFP for core services and ESInet,

0:59:01.680,0:59:07.490

that cybersecurity element will absolutely be built in to that proposal.

0:59:07.490,0:59:12.130

If nothing else we learned a tremendous amount from the Christmas Day bombing in Nashville.

0:59:12.130,0:59:16.310

And Nashville is a bordering, Tennessee is a bordering state to Kentucky.

0:59:16.310,0:59:22.320

And when we first learned about that early morning on Christmas Day, we thought wow,

0:59:22.320,0:59:23.960

we hope no one is hurt.

0:59:23.960,0:59:27.650

And then only came realize some short time later, that the bombing occurred right outside

0:59:27.650,0:59:35.070

of AT&T's, one of their downtown switching facility which there are many elements of

0:59:35.070,0:59:37.530

that facility that have Kentucky ties.

0:59:37.530,0:59:47.061

And we ended up having almost 85% of Kentucky's PSAPs were impacted in one way shape or form

0:59:47.061,0:59:49.980

or another from that Nashville outing.

0:59:49.980,0:59:54.360

Anything from a loss of ANI/ALI to a loss of internet to the ability to receive AT&T

0:59:54.360,0:59:55.580

wireless calls.

0:59:55.580,1:00:03.260

So we absolutely learned lessons on the impact that, or importance of redundancy - network

1:00:03.260,1:00:07.280

redundancy and mitigation systems.

1:00:07.280,1:00:15.000

And cybersecurity will absolutely play a part in that as it's on everyone's mind with the

1:00:15.000,1:00:20.610

hack of the fuel pipeline there on the East Coast.

1:00:20.610,1:00:23.500

Fortunately, that may not hit Kentucky.

1:00:23.500,1:00:28.320

We are not part of the area that is serviced by that, but it is going to have a national

1:00:28.320,1:00:29.320

impact.

1:00:29.320,1:00:32.290

So, yes cybersecurity is definitely going to be on the forefront of our mind.

1:00:32.290,1:00:39.220

We have the fortunate affect, and currently because it's 117 largely disparate systems,

1:00:39.220,1:00:44.020

you can't take down Kentucky's 911 system because it's not a statewide system.

1:00:44.020,1:00:48.940

But moving forward that's something we will definitely be mindful of.

1:00:48.940,1:00:56.070

Alright, well I would like to say a big thank you again to all of our speakers today.

1:00:56.070,1:00:59.110

This concludes today's webinar.

1:00:59.110,1:01:01.360

We appreciate everyone's participation.

1:01:01.360,1:01:08.460

As a reminder, an archived version of today's webinar will be available on 911.gov.

1:01:08.460,1:01:16.810

The next webinar is scheduled for Tuesday, July 13th at noon Eastern time and we hope

1:01:16.810,1:01:19.190

that you will be able to join us.

1:01:19.190,1:01:21.840

Thank you and I hope that everyone has a great rest of your Tuesday.

1:01:21.840,1:01:22.840

[Event Concluded]

[JT1]8.22

1:01:22.840,1:01:23.340

[JT2R1]accelerate infrasion

[JT3]40.30